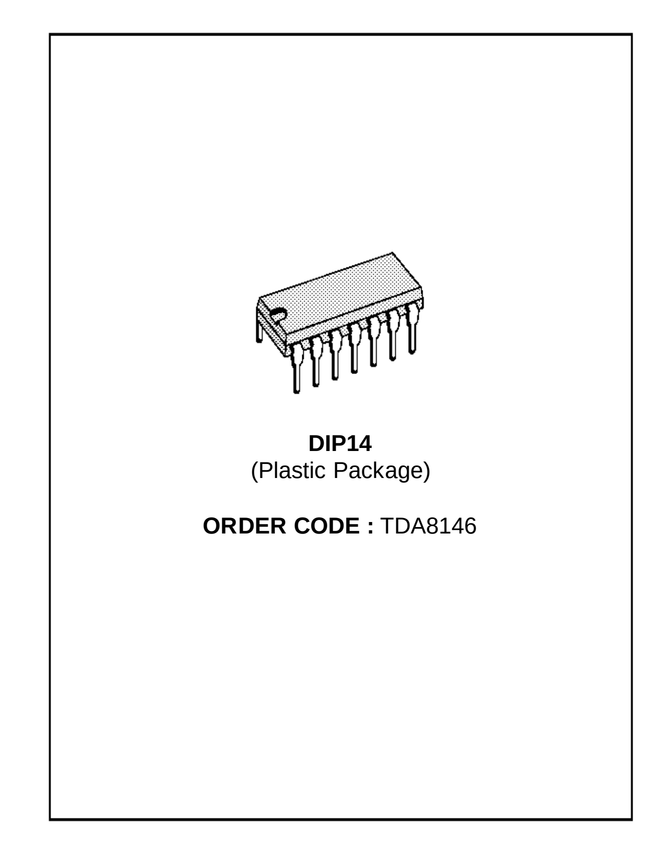


TDA8146

EAST/WEST CORRECTION FOR RECTANGULAR TV-TUBES

- LOW POWER DISSIPATION
- PULSE WIDTH MODULATOR FOR SWITCH MODE OPERATION
- OUTPUT SINK CURRENT UP TO 800mA
- OUTPUT SOURCE CURRENT UP TO 100mA
- PARASITIC PARABOLA SUPPRESSION DURING VERTICAL FLYBACK
- VERTICAL CURRENT SENSE INPUTS GROUND COMPATIBLE
- PROGRAMMABLE PARABOLA CURRENT GENERATOR FOR DIFFERENT TV-TUBES
- EXTERNAL KEYSTONE ADJUSTMENT



DIP14
(Plastic Package)

ORDER CODE : TDA8146

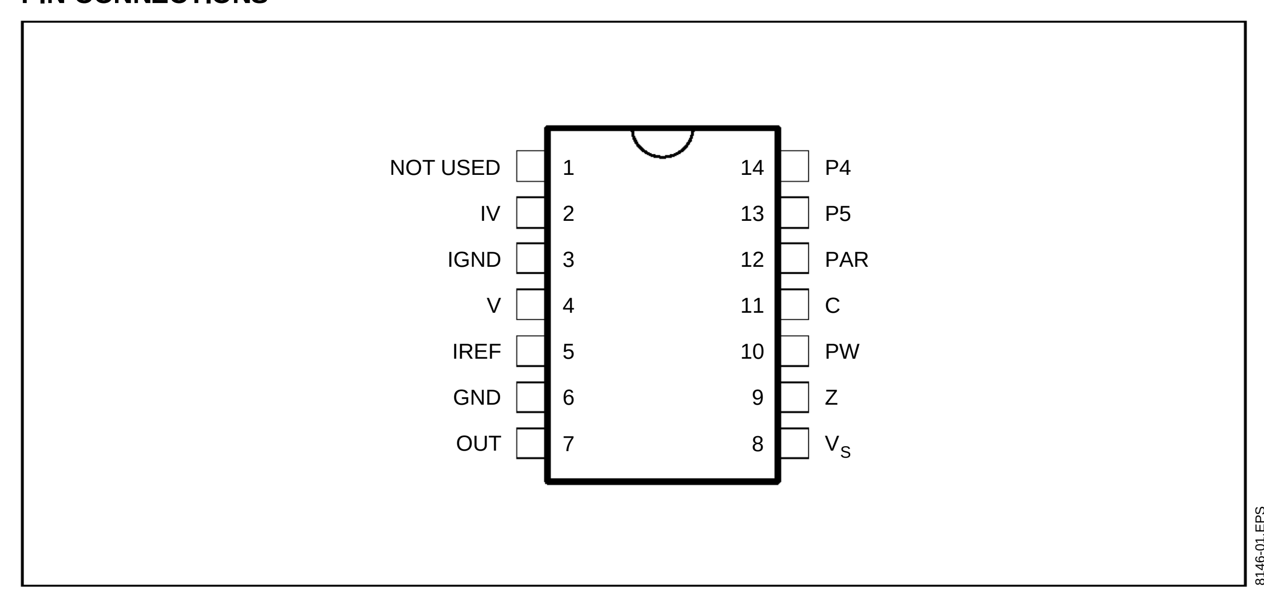
DESCRIPTION

The TDA8146 is a monolithic integrated circuit in a 14 pin dual-in-line plastic package.

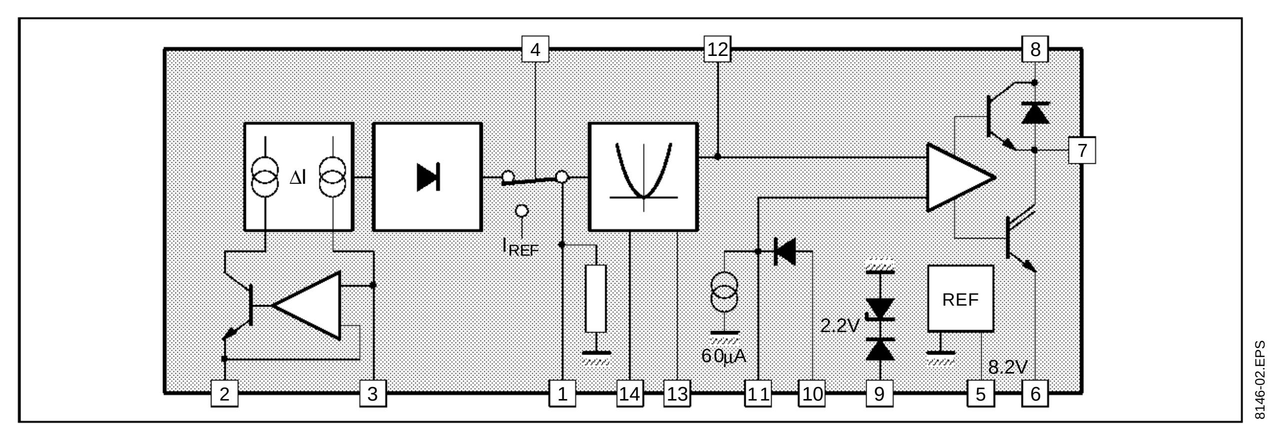
The TDA8146 is designed for use in the east-west pin-cushion correction by driving a diode modulator in TV and monitor applications.

Since the parabola current generator is programmable the device can operate with different CRTs.

PIN CONNECTIONS



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
I_7	Output Sink Current	800	mA
I_7	Output Source Current	100	mA
V_S	Supply Voltage	33	V
V_4	Vertical Flyback Input Voltage	– 0.3 to 60	V
V_{10}	Input Voltage at Pin 10	– 10 to V_S	V
V_9	Input Voltage at Pin 9	– 10 to 20	V
V_{in}	Input Voltage at all other Pins	– 0.3 to V_S	V
T_{stg}	Storage Temperature	– 40 to 150	°C
T_j	Junction Temperature	0 to 150	°C

8146-01.TBL

THERMAL DATA

Symbol	Parameter		Value	Unit
$R_{th\ (j\text{-}a)}$	Junction-ambient Thermal Resistance	Max.	80	°C/W

8146-02.TBL

ELECTRICAL CHARACTERISTICS

(refer to test circuit V_S = 24V, T_j = 25°C ; unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_S	Supply Voltage		15	24	29	V
I_S	Supply Current	V_{out} = LOW		4	7	mA
V_5	Reference Voltage			8.2		V
V_{7L}	Saturation Voltage	I_O = 800mA Sink		1.2	2	V
V_{SAT}	Diode Forward Voltage	I_O = – 800mA		1.1	1.7	V
V_{7H}	Saturation Voltage	I_O = 100mA Source		0.8	1.25	V
I_{11}	Current Sink Pin 11		40	60	80	µA
V_9	Zener Voltage	I_9 = 5mA	20	22	24	V
V_{4T}	Vertical Blanking Threshold Voltage		V_S – 0.5	V_S	V_S + 0.5	V
I_4	Vertical Blanking Input Current	V_4 = 50V	25	50	100	µA
V_2	Reference Voltage at Pin 2	R1 = R2 = 10K		1.3		V
V_3	Reference Voltage at Pin 3			1.3		V
V_{PARO}	Parabola Voltage at Pin 12	ΔV_{SE} = 0		9.7		V
V_C	Parabola Voltage at Pin 12	ΔV_{SE} = + 0.8V		7.05		V

8146-03.TBL

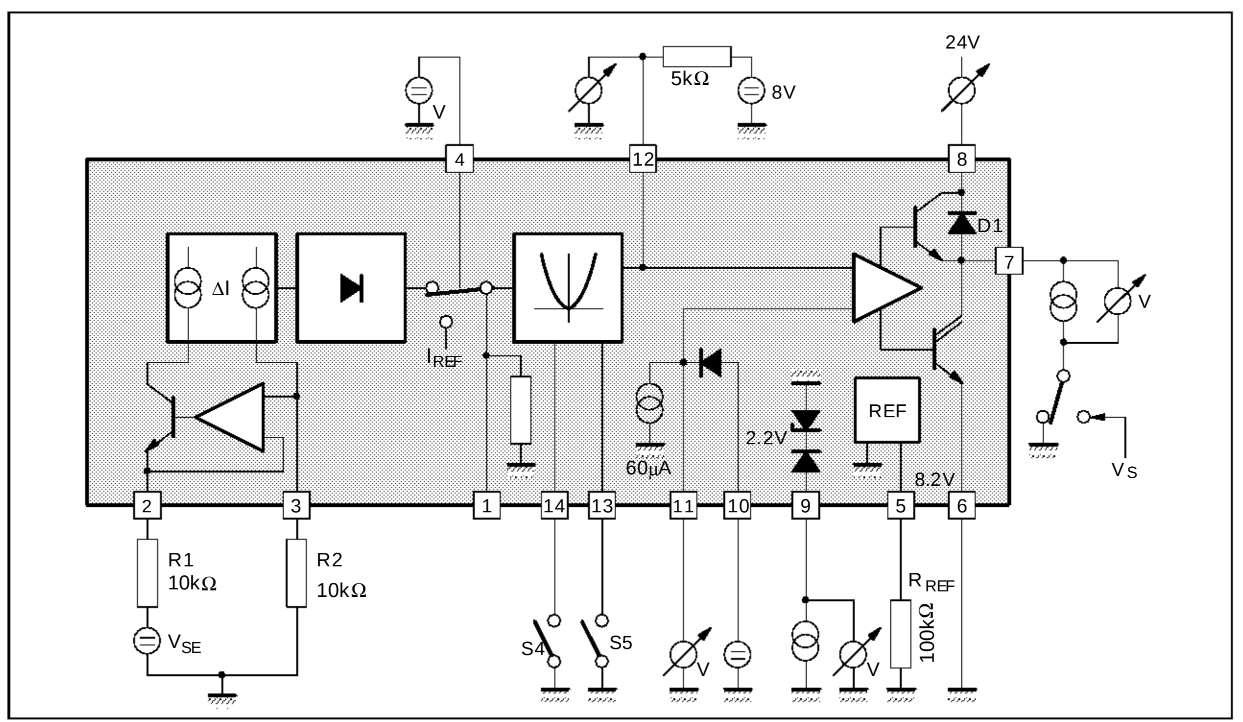
ELECTRICAL CHARACTERISTICS (continued)

(refer to test circuit V_S = 24V, T_j = 25°C ; unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
K_A	Parabola Coefficient	$K_A = \frac{VA}{VB}$		0.25		
K_C	Parabola Coefficient	$K_C = \frac{VC}{VB}$, S4 + S5 open		1.75		
K_5	Parabola Coefficient	$K_5 = \frac{VC5}{VC}$, S4 or S5 Closed		1.07		
K_4	Parabola Coefficient	$K_4 = \frac{VC4}{VC}$, S4 + S5 Closed		1.17		
K_S	Parabola Symmetry	$K_S = \frac{VC}{VD}$	0.94	1.0	1.06	
K_F	Flyback Coefficient	$K_F = \frac{VC}{VD}$, V4 = 15V		1.0		

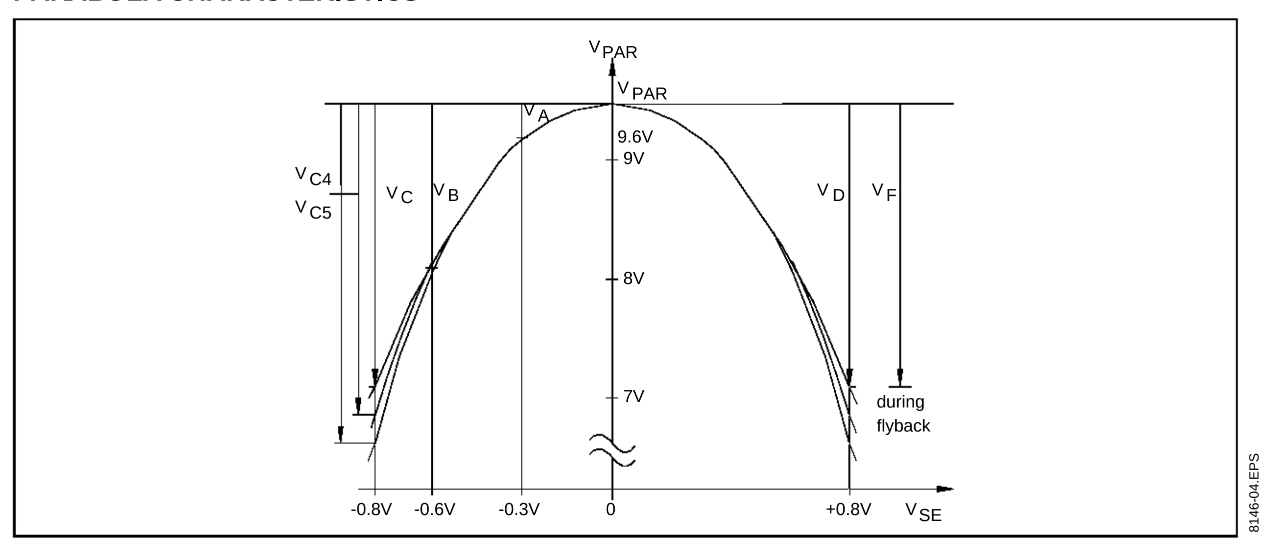
8146-04.TBL

TEST CIRCUIT

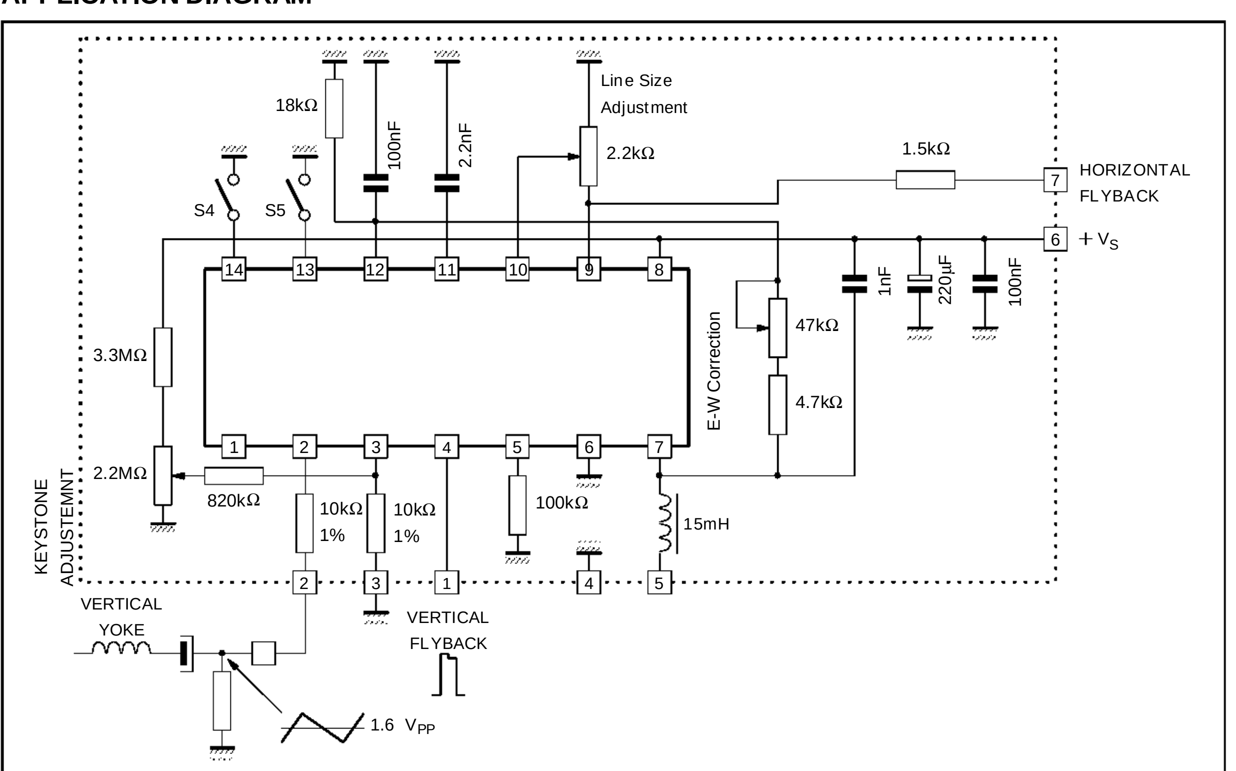


8146-03.EPS

PARABOLA CHARACTERISTICS

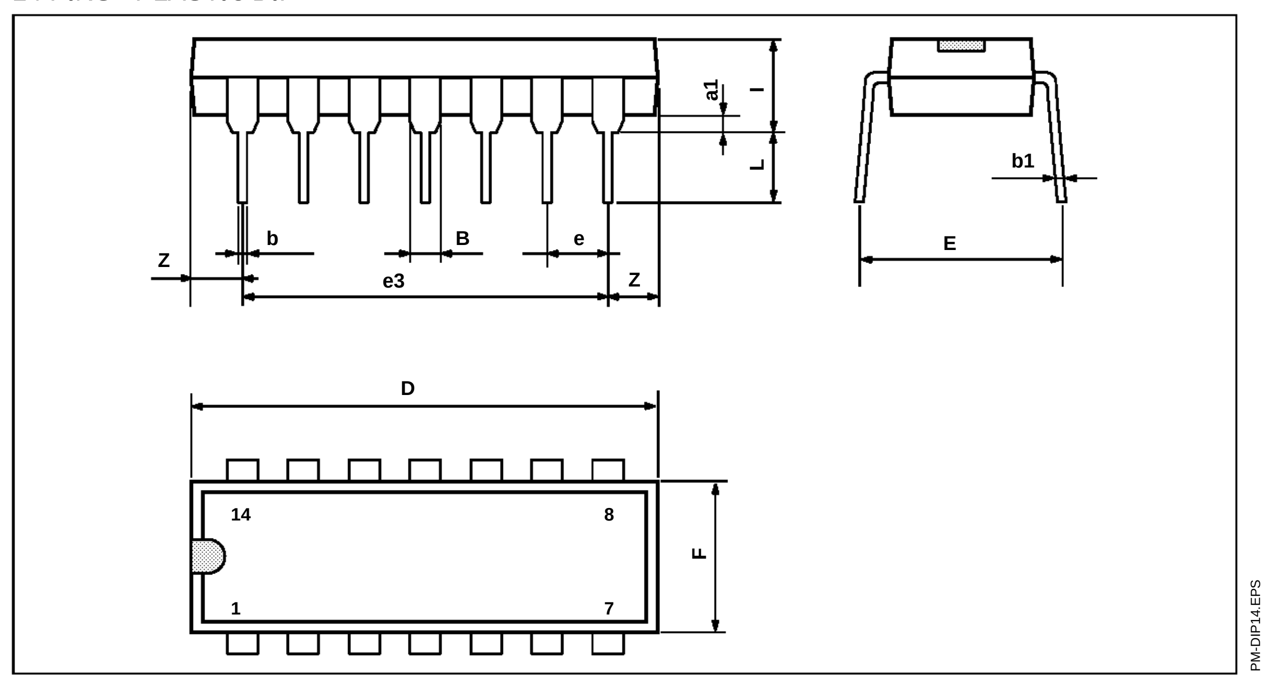


APPLICATION DIAGRAM



PACKAGE MECHANICAL DATA

14 PINS - PLASTIC DIP



Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.51			0.020		
B	1.39		1.65	0.055		0.065
b		0.5			0.020	
b1		0.25			0.010	
D			20			0.787
E		8.5			0.335	
e		2.54			0.100	
e3		15.24			0.600	
F			7.1			0.280
i			5.1			0.201
L		3.3			0.130	
Z	1.27		2.54	0.050		0.100

DIP14.TBL

